ABSTRACT OF THE DISCLOSURE

The present invention provides an ultra-lightweight and highly precise electromagnetic wave concentrator having a high rigidity and also flexibility, which is suitable as a solar ray concentrate device and for communications, this concentrator being produced by a molding process using the effect of stress relaxation in a thin-film material. An ultra-lightweight electromagnetic wave concentrator 10 having a high rigidity and also flexibility is obtained by conducting processing that increases the rigidity by forming a thin-film curved body comprising an electromagnetic wave reflective surface 11 that has the surface shape that is part of a paraboloid of revolution or of a curved surface modeling same by the effect of stress relaxation in a thin-film material, and also forming a structure of reinforcing grooves 13-15 in the reflective surface 11 for increasing the regidity. In order to form the reflective surface shape and the reinforcing grooves 13-15, a pressure is applied to the thin-film material with the molding die, or the thin-film materials is attached to the molding die by pressure and, while maintaining this state, stress relaxation inside the thin-film material is induced by heating with a heating device such as a thermostatic chamber.